

HAMILTON. (J. B.)

The Establishment of a National Quarantine Station Near New York Harbor.

BY
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SURGEON U. S. MARINE-HOSPITAL SERVICE, FORMERLY SUPERVISING
SURGEON-GENERAL M.-H. S.

Reprinted from "The Journal of the American Medical Association"
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THE JOURNAL has secured a copy of Dr. Hamilton's report on the construction of "Camp Low." It is interesting from a sanitary point of view as being a report of the first camp constructed in the United States for cholera suspects, and the rapidity with which the work was accomplished was itself a feat worthy of notice.

REVENUE MARINE STEAMER "U. S. GRANT,"
OFF CAMP LOW, NEW JERSEY, }
SEPT. 20, 1892. }

THE HON. CHARLES FOSTER,

SECRETARY OF THE TREASURY, WASHINGTON:

Sir,—I have the honor to report the establishment, according to your orders, of the National Quarantine Station, "Camp Low," on the government reservation at Sandy Hook.

RAISON D'ETRE.

The reason for the existence for this establishment was the presence in New York harbor of several vessels infected with Asiatic cholera, having on board a very large number of passengers exposed to the danger of infec-

tion, and for whom the provisions made by the health authorities of the State of New York were entirely inadequate. In particular, the passengers from the steamer "Normania," of the Hamburg-American line, were in quarantine for several days, and each day members of the crew were taken sick with cholera. These passengers being detained on board, were constantly subjected, on the one hand, to the terrors of Asiatic cholera, and the hardships of rigorous confinement on the other. Although detained in quarantine, these passengers, most of them American citizens, managed to communicate their unfortunate condition to the public; and American sympathy, always responsive to human suffering, was quick to heed. The Government undertook to supply the deficiencies of the local quarantine at New York, and by your direction I examined the New York quarantine stations at Hoffman's and Swinburne's Islands, and found that Hoffman's Island, the only station to which persons from infected vessels could be removed, was crowded with detained emigrants; that no more could be accommodated, and that no provisions whatever had been made for cabin passengers. More than ten thousand steerage from European ports infected with Asiatic cholera were either on their way or were booked for passage, and ships recently arrived had lost many on the voyage. Under the stress of this menace the Government had no alternative, and by your further direction, I next inquired what measures of precaution could be undertaken by the Government to aid the State of New York in what threatened to become one of the most calamitous years of the Republic, in averting the prospective invasion.

You placed the U. S. revenue steamer, "Grant," Capt. Thos. S. Smyth, at my disposal, and her officers rendered most valuable coöperation. In examining New York Bay and vicinage, in company with Medical Director Gihon, U. S. Navy, and Dr. John H. Rauch, it was seen that Horse-shoe Cove, off Sandy Hook, afforded a perfect anchorage for vessels, and the land opposite being a Government reservation, and no important village or settlement near,

afforded an eligible site on which to establish a quarantine camp, at once easy of access and easy to guard. Fortunately, the old wharf of the New Jersey Central R. R., on which was built a warehouse, was in an excellent state of preservation, and in such condition that it could be easily made the initial point for the new buildings, on which the location of the proposed camp can be seen.

THE CONSTRUCTION OF THE CAMP.

On Friday, Sept. 9, 1892, the steamer "Grant" anchored in Horse-shoe Cove, and with Lieut. Levis and the ship's carpenter, U. S. R. M., measurements of the wharf and buildings were taken. That evening you accepted the proposal of Mr. Austin Corbin, president of the Long Island Railroad, to build the necessary buildings according to my suggestions. That night I spent in writing memorandum requisitions for supplies, and the next morning a force of 150 carpenters, under the direction of Mr. C. M. Jacobs, C. E., and Mr. Cummings, were on the ground, and the buildings were erected with surprising rapidity. These comprised a large dining hall, with a capacity of seating 500 persons; a storeroom for the commissariat; a kitchen; three pavilions; a telegraph office; a baggage-room; a hospital; a laundry; a building for the dynamo; Surgeon Commandant's office; quarters for the correspondents. The railway tracks between the pavilions were of great use, not only in the construction of the Camp, but afterwards in its administrative functions. Over four hundred thousand feet of lumber were used in the construction of the buildings, and they were completed on Saturday morning, September 17.

The dimensions of the buildings were as follows:

<i>Pavilion A</i>	18x343 feet.
Apartments	South 47 feet.
	North 47 feet. Total, 94 rooms.
<i>Pavilion B</i>	13x313 feet.
Apartments	48 single.

<i>Pavilion C</i>	16x330 feet.
<i>Apartment</i> s	South 44 feet.
	North 23 feet. Total, 63 rooms.
Making a total of 209 staterooms.	
<i>Telegraph Office</i>	13x25 feet.
<i>Press Office</i>	10x40 and kitchen 10x13 feet.
<i>Laundry Building</i>	13x64 feet.
<i>Dining Hall</i>	36x96 feet.
<i>Electric Light Building</i> . . .	12x28 feet.
<i>Baggage Room</i>	36x60 feet.
<i>Commissary Building</i>	18x36 feet.
<i>Pantry and Kitchen</i>	27x35 ft.; extra kitchen, 12x23 ft.
<i>Surgeon-Commandant's Room</i> .	13x30 feet.

In addition to the foregoing there were 3,006 feet of sidewalk laid; 4 water closets made; 58 latrines built; 100 tent floors 12x14, and 200 tent floors 10x12 feet were made ready to be placed in position.

On Sunday, September 11, 400 wall tents, previously shipped by the War Department, were set up by the United States Artillery from Fort Hamilton by order of Maj. General O. O. Howard, and speedy provision was made for the early occupancy of the Camp.

After the rush of construction was over, a few carpenters were retained to extend the pavilions. By this means it was intended to do away with the necessity for many tents.

WATER SUPPLY.

Abundance of fresh water is obtained on the Hook by driven well, and the old railway tank was utilized as a source of pressure, and water was piped to the various buildings.

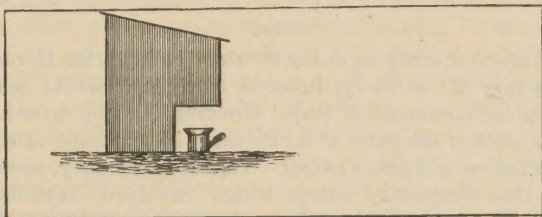
MACHINERY.

Mr. Corbin caused the electric light plant formerly used at Rockaway Beach to be removed and put in position; and after the third night the work of construction was carried on at night by its aid. This has since been used for lighting the Camp. A steam pump was placed at the old tank house to keep up the supply of water in the tank, and another

pump was placed near the dynamo on the wharf and supplied with 500 feet of hose, with sea water connection, to be used in case of fire. I made a contract with the Troy Laundry Co., of New York, to furnish and place in position ready for running, a laundry plant capable of washing for 500 persons a day. This machinery comprised stationary tubs, an engine, two washing machines, a centrifugal wringer, a mangle and drying racks. This was completed according to contract within forty-eight hours, by the men working night and day.

LATRINES.

In a Camp intended to contain suspects from ships infected with the Asiatic cholera, the construction of the latrines and their subsequent management are points of the first importance, for as is well known, the surveillance of persons suspected of cholera must include a watch of the frequency of their bowel movements. In the plan which



Section of Latrine, Camp Low.

was finally adopted, I availed myself of the advice of my friend, Lt. Col. Geo. M. Sternberg, Surgeon U. S. Army, and a delegation from a Committee of the New York Academy of Medicine, consisting of Drs. Loomis, Stephen Smith, Jacobi, Janeway and Allen McLane Hamilton. It was urged by Dr. Jacobi that the use of earth closets or chambers in the state-rooms would make it impossible to ascertain quickly what person in the camp was suffering from diarrhoea, a point which only needed to be stated to be self-evident; therefore latrines were constructed in such a way that the dejecta was

received into a pail, and the little houses themselves placed between the rows of corridors and tents in such a position that the patrolman could easily keep them under observation.

Galvanized iron pails of a capacity of two gallons were provided to receive the dejecta, and milk of lime was ladled into these pails by the patrolmen, who were instructed to systematically inspect them while on their beat. At the same time they were instructed to report to office any person making the second trip to the latrine from his stateroom or tent. Other attendants were directed to mop the seats twice a day with bichloride of mercury solution.

HOSPITAL.

The hospital was constructed in more careful finish than the barracks and was intended for persons falling sick or being injured while in camp. Cholera patients, when found, were removed to and kept in tents near the hospital, and isolated from the remainder of the camp.

PATROL.

To prevent straying of the detained persons, the Honorable Secretary of the Navy, directed the detail of 211 marines under the command of Major Huntington, who drew a complete cordon sanitaire at a safe distance from the camp and maintained a regular patrol. This arduous duty, necessary for this temporary camp, which involved considerable hardship upon the officers and men of Major Huntington's command, could readily be obviated if the Government shall finally conclude to establish a permanent station, by the erection of a brick wall and the dredging of an inner moat.

SEA PATROL.

The sea patrol was a matter of much less difficulty, and, for the first few days, was performed by the steamer "Grant," Capt. Thos. S. Smyth, which officer also detailed Chief Engineer F. H. Pulsifer to aid in making his first purchases, and in various other ways aided in the construction of the camp. The Hon. B. F. Tracy, Secretary of the Navy,

detailed the Monitor "Nantucket," Captain Book, with two steam launches to continue the sea patrol and relieve the "Grant."

THE EXECUTIVE FORCE.

At first I was the only officer, but when the Camp commenced to receive refugees turned over by the health officer of New York, the force consisted of myself as Surgeon-Commandant of the camp, Surgeon W. H. H. Hutton, M. H. S., Passed Assistant Surgeons Wasdin and Stoner, and Hospital Stewards Rohrig and Stearns. At my earnest solicitation the veteran sanitarian John H. Rauch, M.D., consented to remain as sanitary adviser and cholera expert. The remainder of the force consisted of cooks, carpenters, one plumber, and about forty-five laborers. These were employed in continuing the barrack extension and policing the camp. At first we were short-handed and attempted the employment of refugees, but it was found that they could neither be kept at work nor could they be made efficient. Ten sailors uniformed were therefore engaged as an additional force and were employed exclusively in sanitary work. My experience has shown that sailors are better disciplined and can be kept on such duty much better than the ordinary laborers. Mr. Nimmo, an interpreter and medical student, was made the foreman of the disinfecting corps. It was from the first deemed necessary to have female attendants to look after the welfare of the female refugees, and perform such other duties as might be required of them, and Mrs. Dunkinson, of Geneva, New York, was given supervision of their duties. Surgeon Henry W. Sawtelle relieved Surgeon Hutton, and I turned over the command of the camp to him September 22, 1892.

AERATION.

It is well known that aeration is one of the most effective means of disinfection, and for that purpose 2,000 ft. of clothes line was placed in position to enable refugees to aerate their baggage.

SUPPLIES.

The first supplies for the camp were received by the New

Jersey Central R. R., but the local health authorities of New Jersey threw such obstacles in the way of trains as to make it impossible to obtain supplies with regularity or certainty. The steam tug "Talisman," Capt. C. H. Winette, was chartered, to be entirely at the service of the commanding officer of the camp, and make such trips to New York City as should be deemed desirable. Lieut. Wm. J. Herring, U.S.R.M., of the Str. "Chandler," whose headquarters were near the barge office, kindly consented to purchase miscellaneous supplies, and this officer is entitled to the highest commendation for the faithfulness with which he performed this extra duty.

GENERAL.

Should the Government at any time take this for a permanent station, a wall directly across the Hook to the Atlantic, marking the east and west boundaries of the quarantine, would not only obviate the necessity of a military guard, but would allow persons detained to go through the cedar grove back of the camp, and thus add materially to their facilities for recreation while undergoing detention.

The barracks could be weatherboarded and plastered, and heated by steam when necessary. A crematory should be built in the vicinity of the hospital. No isolation ward is necessary, as tents with flies, properly floored and heated by stoves, are better managed than isolation wards, which with every precaution are likely to themselves become centers of infection.

It is obvious that the establishment of this camp met a necessity arising from the great number of immigrants from infected ports massed in the harbor of New York; without it great hardship and greater loss of life must have inevitably resulted, not only among the unfortunate immigrants but in cities and towns near by as well as those remote from New York. The officers engaged in the work have entered upon it with great public spirit, fully imbued with the intention, at whatever risk to themselves, to spare no effort in protecting the country against a great calam-

ity, and I am safe in predicting the final report of the Surgeon-Commandant will show the superiority of National methods in which the whole country have an interested voice, over those which formerly obtained.

There is no question of the power of Congress to legislate in the matter of National quarantines, and it is no argument against the exercise of that power to show that heretofore Congress has only undertaken to supply the deficiencies of State quarantines. Congress has not formally relinquished its power, nor could it do so; it has only failed to use it. When a fringe of States along the Atlantic seaboard comprised almost the whole of the United States, the necessities were different from the present conditions, when the center of population has been removed to the Mississippi Valley. It is inconceivable that one State alone should continue to conduct protective measures, according to its own methods, without regard to the wishes of other States, when all have common interests and are mutually interdependent.

But even more than economical considerations or convenient administration is the great relief to those poor suffering people, huddled together on a ship lying at anchor. They have nothing to fear more deadly than the fatal "crowd poison." Close quarters at sea may be made endurable by the forced ventilation, but lying at anchor the steerage air soon becomes stagnant and poisonous.

I am, sir, very respectfully, your obedient servant,

JOHN B. HAMILTON,
Surgeon U. S. M. H. S.

